# THE ANTARCTICAN SOCIETY

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**HONORARY PRESIDENT — AMBASSADOR PAUL C. DANIELS**

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*SOMETHING NEW! SOMETHING DIFFERENT! SOMETHING EXCITING!*

## FULL PROTECTION FOR THE ANTARCTIC - A VIABLE GOAL?

by

James N. Barnes

Director, The Antarctic Project

*on*

*Tuesday, 24 January 1984*

*8 PM*

National Science Foundation
18th and G Streets NW
*Room 543*

*- Light Refreshments -*

Jim Barnes is an environmental lawyer and an expert on the conservation of the natural environment of Antarctica. Among his many affiliations he is a member of the State Department's Public Advisory Committee on Antarctica, and of its Public Advisory Committee on Law of the Sea; and a member of the International Union for Conservation of Nature and Natural Resources, Commission on Law and Policy. He has authored half a dozen publications on Antarctica, his most recent being "Let's Save Antarctica!" He wrote an excellent chapter on "The Emerging Convention on the Conservation of Antarctic Marine Living Resources" in "The New Nationalism and the Use of Common Spaces", published in 1981. Jim, an Okie from Tulsa, graduated from Northwestern and then went to the University of Michigan Law School. He also is capable of such mundane acts as bicycling, hiking, and photography, but not all at the same time$_a$

*Don't miss Jim Barnes! We have never had anyone quite like him! In fact, there may not be another Jim Barnes, but there are a lot of followers in his flock!*

- - We'll have calendars ONLY for those who have already paid for them - -

We try to introduce new subjects from time to time, since history shows that variety is the spice of life. In this issue we are publishing the paper given by Gentleman Jim Zumberge, President of SCAR (Scientific Committee on Antarctic Research) at the polar session of the American Geophysical Union meeting in San Francisco on December 8th. This seems to be a logical follow-up to both Tucker Scully's Memorial Lecture on the Antarctic Treaty System (October) and Al Chapman's lecture of the State Department inspection cruise (November), and the upcoming lecture by James Barnes. We are also continuing with our publication of dissertation titles turned out by a computer search at Ann Arbor, as, hopefully, this is of interest to some of our readers. Bergy Bits will also include the personal opinions of the writer on various unrelated subjects, which should in no way be construed as anything more than personal comments,

**BAD NEWS, GOOD NEWS.** We are redlining about thirty members who have not paid their dues for 1983-84, which is the largest number of delinquents in a couple of years. However, this wasn't entirely unanticipated, as nearly all of our membership came up for renewal this year in contrast to the past several years when we had large advance-paid memberships. Those being dropped, unless they get their dues in, are Nolan Aughenbaugh - he's a newly appointed Dean at the University of Alaska but we evidently don't have his correct address; Hugh Bennett - who has a long standing reputation for holding on to his dollars; Fred Brownworth; John Bryson; Richard E. Byrd III; Bill Cooke; Steve Fazekas; Harold Fibelman; Miriam Free; Marcus Hermanson; Sam Hinerfeld; Eric Kramer - even his girl friends don't know where he's living; George McCleary; Dick Neff; Bruce Parker; Robert Rofen; Frank Salazar; Seymour Schlossberg; Bill Schoonmaker; Leland Whitmill; and Steve Wilson. There are others like John Spletts, Ed Stump, Bruce Lieske, Wild Bill Cromie, Russell Berry, and Richard Julian whom we know we'll catch up with in due time. Forty-three people signed up for five years, and we (Ruth Siple and I) can't tell you how much we appreciate that - it eliminates a lot of hassling downstream; over 140 have paid for next year - a third of our membership. Our total paid-up membership is 413. THANK YOU! THANK YOU!

**MANAGEMENT OF THE SOCIETY, IS IT OUTDATED?** I have long been a proponent that management by committee action is paramount to disaster, citing the example of a committee coming up with a camel when they were directed to produce a horse. Our Society has changed drastically in membership from its early inception when it was basically a group of Washingtonians; now it is essentially a national organization with a cluster of about a third of our members (approximately 160) living in the Washington area - half of whom have not been to a single meeting in the last six years. Our By-Laws tell us that "The Board of Directors shall consist of not less than four (4) nor more than sixteen (16), each of whom shall be a member in good standing, of full age, and at least one of whom shall be a citizen of the United States and a resident of the District of Columbia." A couple of years ago we amended the By-Laws to include the election of an out-of-Washington area member until we had three on the Board. So essentially we are managed by a President, a Vice-President, a Secretary, a Treasurer, twelve regular Board members, and three out-of-town members. We passed an amendment several years ago that people

could not be put back in office until they had sat out a few terms after leaving their position. This in turn was subsequently modified by the Siple Amendment-which said that the position of Treasurer could be more or less permanent as long as Ruth Siple was willing to fulfill the duties. I sincerely feel that the Society is overmanaged, that the Board of Directors has far too many people, that we would be much better off by reducing the number on our Board, and that we can do this without any further amendments as the By-Laws call for "not less than four." It is pretty hard to keep coining up with good Board members, especially new blood. I would like to see greater out-of-town involvement, but how do we get them into the act? I think that eventually - why not now? - a scheme should be developed whereby our out-of-town members would actually get involved in the management of the Society, that our local Board members should be reduced to two new members a year, and that our Board meetings should only be held semi-annually. After all, the Board of Directors met only once in 1982-83, and the Society flourished with only one meeting. Isn't there a message there? I imagine the Board was a great thing in the conceptual stages of the Society when it was almost an exclusive Washington fraternity, and its meetings were an excuse for having a good old boys' party. I'm not against a good party any time, but I do think that the large Board of Directors is NOT the way to run this Society. It's dangerous!

**CALIFORNIA MEETING OF THOMAS C. POULTER CHAPTER BIG SUCCESS.** The first ever outside-Washington area meeting of the Antarctican Society was held at Stanford University the evening of 8 December 1983 when Dr. Charles Bentley, Chairman of the Polar Research Board at the National Academy of Sciences, addressed the Thomas C. Poulter Chapter of our Society on "The Future of the West Antarctic Ice Sheet." John Katsufrakis of Stanford and Art Ford of the USGS, both cold-hardened Antarctic veterans of probably too many sojourns, engineered the production which was attended by approximately sixty-five people, fifty-two of whom signed a guest book, in spite of a miserable rain falling all over the area. Twenty-four members of our Society live within a stone's throw of the Bay area, which represents the largest single conclave of Antarcticans outside the Washington area. One of the many good things about this group is that they are live active Antarcticans, so we fully expect that this chapter will continue to meet periodically. The Program Chairman for the American Geophysical Union meeting was so encouraged by the large turnout for the polar session in San Francisco that he is thinking in terms of having another session next year. There are three excellent people - John Katsufrakis, Art Ford, and Rob Flint -who like to work and whose enthusiasm will no doubt keep the chapter alive and active. Among the out-of-town attendees were Tahoe and Link Washburn of Seattle, Juan Roederer of Fairbanks, Mark Meier of Tacoma, David Elliot of Columbus, Tony Gow of Hanover, Tim Hushen of Bethesda, Ruth Siple of Arlington, and Paul Dalrymple of Alexandria, as well as the speaker, Charlie Bentley of Madison. However, the most honored guest, by far, was Helen Poulter, widow of Dr. Thomas C. Poulter for whom the chapter is named.

It seems appropriate at this time to reflect on some of the many achievements of Dr. Poulter, as he was truly one of the great scientific giants of Antarctica, one whose scientific curiosity was still being tweaked at his death at age 81. The late Dr. Thomas C. Poulter was the Chief Scientist on the 1933-35 Byrd Antarctic Expedition, Vice-President of the American Polar Society, 1945-78, native of Salen, Iowa (population too insignificant to count in latest census!), and graduated from Iowa Wesleyan College. He served as a submarine officer in World War I, which must have made him some sort of a pioneer in that field. As a physics professor at Iowa Wesleyan, he had a student by the name of James A. Van Allen who sort of became famous in his own right for discovering radiation belts around the earth. Van Allen

gave credit to Dr. Poulter for kindling the flame of his scientific curiosity. Prior to going to the Antarctic in 1933, Dr. Poulter participated in a large expedition seeking meteorites in the Southwest. If he had only known of the rich meteorite fields existing in the Allan Hills (Victoria Land), he would have hooked up a dog team and gone "over the hill" while at Little America II! I wonder if he ever philosophized on the possibilities of meteorites in Antarctica - I bet he must have. Dr. Poulter became Science Director of the Armour Institute Research Foundation in Chicago in 1936, and it was while there that he designed the ill-fated Snow Cruiser (which wasn't unlike the large vehicles which the Russians use successfully today in Antarctica). During World War II Dr. Poulter worked at the Navy's research station at Point Barrow, Alaska. He joined the Stanford Research Institute in 1948, becoming its Associate Director. In 1960 he became general manager of Physical and Life Sciences at the Institute and in 1963 established SRI's Bio Sonar Laboratory at Fremont for the study of biological sonar and diving mammals, including studies with blind people. He served as Director of SRI's Poulter Laboratories, named after him for his contributions in the fields of detonation and shock pulse phenomena. He held more than 75 patents on diverse inventions, many being antisubmarine devices. In his late years he was very active in marine mammal sounds. After his "paper retirement," he worked with a surgeon at SRI and at the University of California Medical School in San Francisco on experimental implants to aid the deaf. He was quite a man. The lovely house that he and Helen built in the Los Altos Hills has one of the most spectacular views in the whole Bay area. It is most appropriate that the Californians saw fit to memorialize Dr. Poulter by naming their chapter after him, as they couldn't have picked a more distinguished Antarctic scientist. Good luck to the chapter. May it flourish as did Dr. Poulter's career.

**THE SCIENTIFIC COMMITTEE ON ANTARCTIC RESEARCH (SCAR)** - James H. Zumberge.

SCAR and the Antarctic Treaty are legacies of the IGY (International Geophysical Year). By the time the IGY ended on December 31, 1958, both SCAR and the Treaty were born. SCAR was formed by the International Council of Scientific Unions (ICSU), and the Treaty came into force in 1961 after extended negotiations that were rooted in pre-IGY days.

The purpose of SCAR is to coordinate research in Antarctica, sometimes initiate new research programs, respond to recommendations from the Treaty Nations, sponsor symposia and workshops, and to maintain open lines of communication between the scientists of the member nations.

Most of the scientific matters of SCAR are handled in nine of ten working groups: Biology, Geodesy and Cartography, Geology, Glaciology, Human Biology and Medicine, Meteorology, Oceanography, Solid Earth Geophysics, and Upper Atmospheric Physics. The tenth working group, Logistics, is an exception to the generality that SCAR deals only in scientific matters„

When other matters rise that do not fall neatly within the purview of the working groups, groups of specialists are organized. Currently, five such groups exist: Antarctic Climate Research, Seals, Southern Ocean Ecosystems and their Living Resources, Antarctic Sea Ice, and Antarctic Environmental Implications of Possible Mineral Exploration and Exploitation.

* [Editor note: SCAR dates back to September 1957; the Antarctic Treaty was signed 1 December 1959, but Informal Working Group on Antarctic meetings date back to 13 June 1958]

This last-named group has particular significance because it reflects a shift in SCAR activities from those that are purely scientific to those that have a broader context. It also serves as an example of how SCAR responds to formal requests from the Treaty Nations.

From the beginning, SCAR maintained a rigid distinction between science and politics. This separation remains until this day, but the line between the two has become more finely drawn, and SCAR must exercise constant vigilance to avoid matters and policies that, while they may relate to scientific activities, are the business of the Consultative Parties who administer the affairs of the Antarctic Treaty. SCAR and the Treaty Nations normally communicate through their respective National Committees.

The question of Antarctic mineral resources had never been raised within SCAR until 1976. That year, SCAR met in Mendoza, Argentina and tabled a recommendation from the Eighth Antarctic Treaty Consultative Meeting held the previous year in Oslo. That recommendation asked SCAR to identify the most-likely areas in Antarctica where mineral exploration and exploitation might occur, the extent to which such activities might affect the marine and terrestrial environments in general and ecosystems in particular, and the kinds of monitoring programs that should be developed prior to the commencement of any mineral activities.

SCAR was apprehensive about its response lest someone infer that by taking on the assignment, SCAR was tacitly endorsing a move toward exploitation of mineral resources in Antarctica. Keep in mind that the OPEC quadrupling of the world price of crude oil in 1973 and 1974, caused oil importing nations of the free work to begin thinking about alternative sources of this commodity. Both SCAR and the Treaty Nations had avoided the minerals issue until it was forced on their agendas by international events beyond their control.

Without belaboring the reasons why both SCAR and the Treaty Powers finally addressed the question of mineral resources, suffice to say that SCAR organized a group of specialists to deal with the request from the Eighth Treaty Meeting. The study made by the group was conveyed to the Consultative Parties in time for their Ninth Meeting in London in October 1977, and a published version appeared in 1979.

The story does not end there, and indeed is still unfolding. The present SCAR Group of Specialists on Antarctic Environmental Implications of Possible Mineral Exploration and Exploitation is an outgrowth of its predecessor who first addressed the question in 1976. The Consultative Parties are now working towards an agreement on a minerals regime for Antarctica which will govern the way in which minerals, including offshore hydrocarbons, could be exploited within the framework of the Treaty,, Since the Treaty itself is silent on the question of resource development, the Consultative Parties are trying to forge a separate convention to handle this problem,, They have turned to SCAR for answers to scientific questions that arise during the course of negotiations, but SCAR's Working Group has no say in the design of the concord toward which the Treaty Nations are working.

SCAR's spectrum of activities will be further broadened in 1985 when it joins with the International Union for the Conservation of Nature (IUCN) in sponsorship of a symposium on "The Scientific Requirements for Antarctic Conservation." ICUN's view of the future of Antarctica has political connotations that include the possibility of making Antarctica into a World Park with all the ramifications that status implies. SCAR, however, has no official position on that question, and believes that matters such as these lie in the realm of inter-

national diplomacy, not international science.

From time to time, other groups have tried to entice SCAR into taking an official stand on one policy or another that bears on the future *of* the Continent. The most recent of these came from a New Zealand based group that wanted SCAR to intervene with the French who are planning to construct an airstrip to improve the logistic support of their scientific base in Terre Adelie. The group protested that the building of this landing field would have undesirable environmental consequences on the local ecosystem, and that the facility should not be built. SCAR referred the matter to its Working Group on Biology, but SCAR does not have the authority to tell the French Government what to do in cases like this, nor does it have the inclination to take an official position on whether the strip should or should not be built. Our role is to determine to the best of our ability what the environmental consequences will be and provide that information to those who want to refer to it in making the decision,,

Unfortunately, many will deduce from SCAR's refusal to make official pronouncements on matters such as the proposed French airstrip that SCAR has no position on conservation in Antarctica. Nothing is further from the truth because since the early days of their existence, both SCAR and the Consultative governments have been conscious of the fragility of the Antarctic ecosystem and the need for protective measures. Indeed, in 1964 on recommendations formulated by SCAR, the Treaty Nations adopted guidelines for the conservation of Antarctic flora and fauna and designated a number of Specially Protected Areas. These measures became effective in 1966. They have since been expanded, and in 1972 the Consultative governments adopted SCAR's advice on another concept of Sites of Special Scientific Interest. Several of these have now been established and SCAR is compiling an annotated Atlas of Antarctic Protected Areas and is preparing specific recommendations for the establishment of new sites.

SCAR even published a small booklet to advise visitors and tourists on proper environmental behavior when in Antarctica to insure that conservation and preservation of the environment is practiced by all who enter the Treaty area. Those who would charge SCAR of indifference or negligence on conservation matters in Antarctica have no basis in fact for doing so.

Over the twenty-five years that SCAR has been in existence, it has enjoyed remarkable stability in carrying out its mission of fostering and guiding research. This work has continued unabated in spite of international events that have posited some of its member nations in opposing stances. Neither the cold war of the late fifties and early sixties, nor the war over the Falkland/Malvinas Islands, nor any of the other international incidents and conflicts of the last quarter-century have had any impact on the regular and ongoing activities of SCAR. This has been due in no small measure to SCAR's determination to maintain its apolitical posture in all that it does.

Some of the SCAR delegates and members of SCAR Working Groups and Groups of Specialists act as advisors to their governments during meetings of the Consultative Parties, but they do so as scientific representatives of their respective countries and not as emissaries from SCAR.

SCAR's membership is open to any nation that establishes an ongoing scientific program in Antarctica. The original twelve have grown to fifteen [Editor note: sixteen have now ratified the Treaty], and at least three other members will apply for membership status soon. At the Seventeenth Meeting of SCAR in Leningrad in 1982, observers from Brazil, Peoples Republic of China, India, Italy, and the Netherlands were present because their respective countries had indicated inten-

tions to establish scientific research programs in Antarctica. Uruguay has been invited to send an observer to the Eighteenth Meeting of SCAR in Hamburg next year. It is not impossible that SCAR could have twenty members by the end of this decade.

**OPEN SEASON ON ANTARCTICA: UNITED NATIONS GETTING INTO THE ACT.** The United Nations evidently does not believe in the old axiom that if it isn't broken, leave it alone, because in late November a resolution was passed, adopted by consensus, that asks General Javier Perez de Cuellar (wonder if he's related to Mike Cuellar, the superstitious pitcher of yesteryear for the Baltimore Orioles, or, could he be one and the same person?) to "prepare a comprehensive factual and objective study on all aspects of Antarctica, taking fully into account the Antarctic Treaty system and other relevant factors." The "other relevant factors" seem to be the Third World countries who feel/fear that they will miss out on the subdivision of Antarctic goodies at some future date. The report won't be completed for a year, and then will start "the real controversy" - as written by Michael Berlin in the Washington Post on 1 December 1983. The General Assembly's Political Committee did find some good things during their three days of discussions on Antarctica: unanimous praise for the Treaty's effectiveness in isolating the continent from the arms race, safeguarding its environment, and fostering cooperative scientific research. Berlin wrote that "the Treaty powers have recognized the emerging pressures and are eager to be responsive enough to satisfy the moderates in the Third World without relinquishing control." One American official was quoted as saying, "The Treaty keeps the territorial claimants at bay. The Third World says it doesn't want to destroy the Treaty, but if there's some assertion of the 'common heritage' concept, some call for international control, some proprietary right for resource revenues, that means there is no national jurisdiction, no sovereignty possible. That's what Washington fears most. It would trigger the claimants' action,- force them to reassert their claims, and they would blow the Treaty apart. And we would have lost its tremendous disarmament aspects." The article went on to say that "Negotiations among Treaty parties have included proposals that a portion of resource revenues be set aside for international purposes, such as administering Antarctica. And commercial exploitation, under these proposals, would be open to private or state syndicates of countries that are not parties to the Treaty." It seems to this innocent bystander that the United Nations should have more world-pressing problems in this troubled world than Antarctica which appears to me to be doing just fine with its Antarctic Treaty plus SCAR.

**ADDENDA TO LAST ISSUE LISTINGS OF DISSERTATIONS.**

Under Atmospheric Sciences add:

Kuhn, Michael. Measurements and analysis of the spectral transparency of the East Antarctic atmosphere. University of Innsbruck.

Vergeiner, I. Mixing layer concept and Richardson number in stable stratification, based on an analysis of wind and temperature profiles of the South Pole Station, 1958. University of Innsbruck.

Weller, Gunter. The heat budget and heat transfer processes in natural ice bodies. 1968. University of Melbourne.

Under Women of Antarctica add:

Kellogg, Davida$_0$ Microevolutionary mechanisms in the evolution of Miocene to recent radiolaria from Pacific deep-sea cores. 1973. Columbia University. (Davida writes that "about a third of the work involved rads from south of the Antarctic convergence.")

I should have remembered that guy Vergeiner, as he took my data and beat me to it working up a doctoral dissertation. I felt an obligation to get the scientific data out into the community as early as possible, so I did, not suspecting that lurking somewhere in the Alps was a frustrated meteorologist looking for some data to analyze! He never contacted me about what he was doing, nor did his thesis advisor who was an Antarctic colleague of mine; I never found out about it until a couple of years afterward — from a third party. It didn't hurt me professionally as I was working up my data through Lettau the Elder, who was tops in the world in micrometeorology. But I did learn a lesson - don't be a nice guy when you have some original data, as there's always some out there waiting to do you in.

**DISSERTATIONS ON GEOLOGY.**

Vavra, Charles Lee. Provenance and alteration of the Triassic Fremouw and Falla formations, central Transantarctic Mountains, Antarctica. 1982. The Ohio State University.

Balshaw-Biddle, Katherine M. Antarctic glacial chronology reflected in the Oligocene through Pliocene sedimentary section in the Ross Sea. 1981. Rice University.

Cooke, David William. Variations in the seasonal extent of sea ice in the Antarctic during the last 140,000 years. 1978. Columbia University.

Welker, Douglas Brent. A paleoclimatic study of three Southern Ocean deep-sea cores. 1978. Case Western Reserve University.

Stump, Edmund. On the Late Precambrian - Early Paleozoic metavolcanic and metasedimentary rocks of the Queen Maud Mountains, Antarctica, and a comparison with rocks of similar age from southern Africa. 1976. The Ohio State University.

Aniya, Masamu. Numerical analyses of glacial valleys and cirques in the Victoria Valley system, Antarctica, from photogrammetrically derived terrain data. 1975. University of Georgia.

Whillans, Ian Morley. Mass-balance and ice flow along the Byrd Station strain network, Antarctica. 1975. The Ohio State University.

Lozano, Jose Abigail. Antarctic sedimentary, faunal, and sea surface temperature responses during the last 230,000 years with emphasis on comparison between 18,000 years ago and today. 1974. Columbia University.

Mayewski, Paul Andrew. Glacial geology and Late-Cenozoic history of the Transantarctic Mountains, Antarctica. 1973. The Ohio State University.

Anderson, John B. The marine geology of the Weddell Sea. 1972. The Florida State University.

Murphy, Donald James. The petrology and deformational history of the basement complex, Wright Valley, Antarctica with special reference to the origin of the Augen gneisses. 1972. University of Wyoming.

Behling, Robert Edward. Pedological development on moraines of the Meserve Glacier, Antarctica. 1971. The Ohio State University in cooperation with Miami University.

Gunner, John Duncan. Age and origin of the Nimrod group and of the Granite Harbour intrusives, Beardmore Glacier region, Antarctica. 1971. The Ohio State University.

Linkletter, George Onderdonk, II. Weathering and soil formation in Antarctic dry valleys. 1971. University of Washington.

Eastin, Rene. Geochronology of the basement rocks of the central Transantarctic Mountains, Antarctica. 1970. The Ohio State University.

Holdsworth, Gerald. Mode of low of Meserve Glacier, Wright Valley, Antarctica. 1969. The Ohio State University.

LaPrade, Kerby Eugene. Geology of Shackleton Glacier area, Queen Maud Range, Transantarctic Mountains, Antarctica. 1969. Texas Tech University.

Rutford, Robert Hoxie. The glacial geology and geomorphology of the Ellsworth Mountains, West Antarctica. 1969. University of Minnesota.

Wilbanks, John Randall. Geology of the Fosdick Mountains, Marie Byrd Land, West Antarctica. 1969. Texas Tech University.

Barrett, Peter John. The post-glacial Permian and Triassic Beacon rocks in the Beardmore Glacier area, central Transantarctic Mountains, Antarctica. 1968. The Ohio State University.

Giovinetto, Mario Bartolome,, Glacier landforms *of* the Antarctic coast and the regimen of the inland ice. 1968. The University of Wisconsin-Madison.

Lindsay, John Francis. Stratigraphy and sedimentation of the lower Beacon rocks of the Queen Alexandra, Queen Elizabeth, and Holland ranges, Antarctica, with emphasis on paleozoic glaciation. 1968. The Ohio State University.

Minshew, Velon Haywood, Jr. Geology of the Scott Glacier and Wisconsin Range areas, central Transantarctic Mountains, Antarctica. 1967. The Ohio State University.

Long, William Ellis. The stratigraphy of the Ohio Range, Antarctica. 1964. The Ohio State University.

Robinson, Edwin Simons. Geological structure of the Transantarctic Mountains and adjacent ice covered areas, Antarctica. 1964. The University of Wisconsin-Madison.

Cameron, Richard Leo. Glaciological studies at Wilkes Station, Budd Coast, Antarctica. 1963. The Ohio State University.

Calkin, Parker Emerson. Geomorphology and glacial geology of the Victoria Valley system, southern Victoria Land, Antarctica. 1963. The Ohio State University.

Halpern, Martin. Cretaceous sedimentation in base O'Higgins area of northwest Antarctic Peninsula. 1963. The University of Wisconsin-Madison.

Pearn, William Charles. Thermoluminescence ages of the igneous rocks of Marble Point, Antarctica. 1963. University of Kansas.

Kehle, Ralph Ottmar. Analysis of the deformation of the Ross Ice Shelf, Antarctica. 1961. University of Minnesota.

Reid, John Reynolds, Jr. Structural glaciology of an ice layer in a firn fold, Camp Michigan, Bay of Whales, Ross Ice Shelf, Antarctica. 196'1. The University of Michigan.

Warner, Lawrence Allen. Structure and petrography of the southern Edsel Ford Ranges, Antarctica. 1942. The Johns Hopkins University.

Wade, Franklin A. Some contributions to the geology, glaciology, and geography of Antarctica. 1937. The Johns Hopkins University.

Stewart, Duncan, Jr. Geology and petrography of the Antarctic continent. 1933. The University of Michigan.

**DISSERTATIONS ON GEOPHYSICS.**

Greischar, Lawrence Lee. An analysis of gravity measurements on the Ross Ice Shelf, Antarctica. 1982. The University of Wisconsin-Madison.

Bucher, Gerald Joseph. Heat flow and radioactivity studies in the Ross Island - Dry Valley area, Antarctica and their tectonic implications. 1980. University of Wyoming.

Jezek, Kenneth Charles. Radar investigations of the Ross Ice Shelf, Antarctica. 1980. The University of Wisconsin-Madison.

Kong, Michael. Geophysical investigations of the southern continental margin of Australia and the conjugate sector of East Antarctica. 1980. Columbia University.

Robertson, James Douglas. Geophysical studies on the Ross Ice Shelf, Antarctica. 1975. The University of Wisconsin-Madison.

Clough, John Wendell. Propagation of radio waves in the Antarctic ice sheet. 1974. The University of Wisconsin-Madison.

Beitzel, John Edward. Geophysical investigations in Marie Byrd Land, Antarctica. 1972. The University of Wisconsin-Madison„

Scharnberger, Charles Kirby. Plate tectonics and paleomagnetism of Antarctica. 1971. Washington University.

Acharya, Hemendra Kumar. Wave propagation in inhomogeneous media with Antarctic ice cap as model. 1969. The University of Wisconsin-Madison.

Crunk, Caspar. Glaciological investigations near the ice sheet margin, Wilkes Station, Antarctica. 1968. The Ohio State University.

Behrendt, John Charles. Geophysical studies in the Filchner Ice Shelf area of Antarctica. 1961. The University of Wisconsin-Madison.

Clapp, James Leslie. Survey control for Antarctic ice flow studies. 1964. The University of Wisconsin-Madison.

Vickers, William Ward. A study of ice accumulation in western Antarctica. 1965. McGill University.

**EVERYTHING IS NOT WHITE OR BLACK.** The print-out of dissertations was listed by years, not disciplines, not by departments; then Bergy Bits broke them down according to some unknown mythical formula (probably the time elapsed since the last cup of coffee). We can't always tell from the department designated in the print-out whether a study is really geography, geology, glaciology, geophysics, or whatever, as so many cross boundaries when they do their dissertation. Now take the last one above, the one by Vickers; it doesn't belong under geophysics, and we probably wouldn't have even included old Bill if it hadn't been for one of the nice guys (Dick Goldthwait) writing us from Florida, asking how come Bill's dissertation wasn't listed under meteorology. According to the computer Bill got his degree in the Geography Department at McGill; Dick writes that he got it under Svenn Orvig. And since we had no grouping for geography, we spread titles around a bit and Bill came out in geophysics. It's actually much better than he deserved, based on how strong he came on when he arrived at Little America V in the austral summer of '57-'58. There were quite a few people who wouldn't have been the least bit hesitant to pushing him headlong into Crevasse Valley. The real miracle here is that Vickers shows up at all, not that he is out of place!

**NSF'S DIVISION OF POLAR PROGRAMS ADVISORY COMMITTEE.** The newly restructured Division of Polar Programs Advisory Committee met for the first time at the National Science Foundation in Washington, D.C. on 15-16 September 1983. The Advisory Committee, which the Foundation originally established on 1 October 1977, provides

"advice, recommendations, and oversight concerning support for research and research-related activities in the polar regions area." Previously, the Committee had been comprised of six subcommittees that focused on specific science disciplines and logistics. The present Committee is an interdisciplinary group with one to three members representing each of the five broad scientific disciplines in which the Division supports research. These are biology and medicine, ocean sciences, earth sciences, atmospheric sciences, and glaciology. The Committee will provide general oversight of management and program balance for the Division's arctic and antarctic programs. Relevant committee members also will review in depth each disciplinary program at least once every three years; two or three other scientists who are experts in the discipline under review will help the committee members with these reviews. The Committee will meet two or three times each year, and members will ordinarily serve 3-year terms. However, six of the current group will serve only two years to ensure an orderly rotation of the committee's membership. The present 12-member committee will be expanded to include three specialists in polar logistics and other related areas. The current members are:

Ian Dalziel, Lamont-Doherty Geological Observatory, Columbia University;

James R. Heirtzler, Department of Geology and Geophysics, Woods Hole Oceanographic Institution;

William W. Kellogg, National Center for Atmospheric Research;

Louis J. Lanzerotti, Bell Laboratories;

Ursula B. Marvin, Smithsonian Astrophysical Observatory;

James McCarthy, Department of Biology, Harvard University;

Gifford H. Miller, Institute for Arctic and Alpine Research;

Christopher Mooers, U.S. Naval Post Graduate School;

Ellen S. Mosley-Thompson, Institute of Polar Studies, Ohio State University;

Stephen C. Porter, Department of Geological Sciences, University of Washington;

Elmer Robinson, Department of Chemical Engineering, Washington State University;

Clayton White, Department of Zoology, Brigham Young University.

**HAPPY NEW YEAR TO THE WESTWIND, TOO.** The daily sitrep from the USCGC WESTWIND on 1 January 1984 seemed innocuous enough, in fact, upbeat, reporting that a helo flight taking scientists to the Jason Peninsula had resulted in significant findings, with the icebreaker navigating through heavy second/multiyear ice. And the message ended with "best wishes for a Happy New Year from WESTWIND." The next message, some seven hours later brought bad tidings - at 6 PM (Greenwich) the icebreaker had run afoul the 100-foot sheer ice cliff on the Larsen Ice Shelf when the multiyear heavy brash field shifted, resulting in more than a 30-foot gash six feet above the water line, and the ship was listing 8.5 degrees. What a great way to celebrate New Year's Day! Two compartments had been flooded, but by 8 PM (Greenwich) the ship had worked clear of the shelf and dewatered the flooded compartments. Before the day was over, they had maneuvered into an open lead. It was a harrowing experience shared by our Society's president, Dr. Mort Turner, who was aboard the WESTWIND at the time. As this is being typed (January 4th) everything appears to be under control; plans are being made to cruise back to South America; and the scientists are saying they'd prefer a flight to a cruise. C'est la vie!

**WHO'S ON FIRST! WHAT'S ON SECOND!** The guessing game in Washington is centered on who will replace the Squire of Newburyport, Ed Todd, as Director of the Division of Polar Programs. The drama intensified considerably when NSF relented under some pressure and opened the recruitment to academia (previously one had to be a government bureaucrat). We have heard various and sundry names being batted around, some from within the Foundation, some from other government offices, some from university circles. Bergy Bits has heard some pretty impressive names, and let's hope that when the selection committee gets together they can pick a winner.

**DON'T FORGET US ON BAE I** (Henry Harrison to Bergy Bits on 18 November 1983). We at Little America I also built up a reputation for imbibing the right stuff. Our serious drinking was done during the last month or two after practically all of the work program had been completed. True, we did find many excuses during the year to justify special party drinking - 4th of July, return of the sun, South Pole Flight and others. Some of those turned out to be barnburners featuring a football game outside on the Barrier in one case and a smashed mess table inside in another. The sky was the limit on these parties on that day but the following day was always back to normal operations.

The illegal drinking started long after the South Pole Flight when many of the 42 winterites were more or less waiting for the CITY to come get us and take us home. I recall the ringleaders as being Joe Rucker (Paramount News), Blackie (storekeeper) and Jim Feury (snowmobile). One of them would show up at my bunk after taps and say, "P-s-s-t, party just getting going in the Norwegian House!" Doc Coman's alcohol keg held out to the bitter end to provide fuel for the parties. Those in the know referred to these midnight sessions as "Meetings of the Bay-of-Whales Harbor Board." They were strictly verboten, of course, but we had a most unusual thrill one night around two o'clock when in walked THE COMMANDER, saying "Could I join the party?" And he did!

**MAIL BAG.** Here's a kicker, that staid and true son of New England, *Bob Nichols* has moved to Seminole, Florida - totally disregarding my admonitions. However, he wrote "my heart will stay in Massachusetts and New Hampshire." His ancestors didn't cross the North Atlantic until 1630, which makes him sort of a late arrival in Boston. Bob is too young to be moving to a retirement community, but you can't tell darn geologists anything anyway. - - - The *Zumberges* were interviewed in the Los Angeles Times on December 26th. He broke my heart when they said that his favorite photo (among many hanging on the wall) was one showing him standing between a couple of millionaires, O.J. Simpson and Marcus Allen. I bet neither one of them ever graduated from college. I thought his favorite picture would be one of him with Bert Crary and Larry Gould, not of those two! Marilyn Zumberge comes across as a very gracious and lovely lady. I guess she does the whole ball of wax at home, as she said, "Jim hardly knows where the grocery store is." - - - One of *Priscilla Grew's* current responsibilities as one of the Commissioners of Public Utilities in California is establishing the new phone rates following the breakup of Ma Bell. I had never met Priscilla until recently; she is a wonderful person, a pure delight to talk to. Ed has to be out of his mind to have an ocean and a continent between them! - - - I think *Winnie Reuning* has done just an excellent job since she became editor of the Antarctic Journal. - - - Enjoyed a couple of evenings drinking beer with *Mike (South Pole 78) Pavlak* in Las Cruces. He is still with Holmes and Narver, and is married to a beautiful blonde with an engaging personality who has a cat. Mike has one more year of work at White Sands, during which time his bride will finish her degree work in computer sciences at New Mexico State. They are nice folks. - - - *Red Jacket (South Pole 58) Jorgensen* is now president of AGA. As those old guys on the corner say in the IBM commercial, "You can't be talking about our Red Jacket?"